



Merrill Lewis poses at his amateur radio base station. (Post-Crescent photo)

## He's now tuned to storms

BY PETER BACH

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OSHKOSH — Merrill Lewis is a retired music teacher here who was smitten by the sounds of a different drummer.

Nowadays, Lewis, 67, in his spare time, heads an indispensable crew of Winnebago County amateur radio operators. His ear has adjusted from pleasant music to the crisp transmissions on the airwaves during times of emergency.

Forty-one radio amateurs comprise the county's local amateur radio emergency service network, or ARES for short.

When alerted, the crew, whose members act as weather spotters, can tell even the National Weather Service what it doesn't know.

The net is prepared to operate on a moment's notice on the two-meter FM band. A two-meter base station is located in the city-county safety building here, so once alerted members can get emergency messages out in a hurry and well beyond county lines.

Although Lewis and all amateur radio operators are trained to transmit and receive voice and Morse code on usually more than one frequency, two-meters has the American Radio Relay League's stamp of approval as the local emergency channel.

The frequency, via repeater station, has an effective range of up to 75 miles. One of its key features, since the two-meter antenna is relatively short, is mobility. Using only a 1½-watt handy-talky, a licensed radio amateur may readily broadcast warnings from distant points.

One of the team members, Lewis says, lives in Wautoma. "He's from out of the county but we welcomed him in. He lives in the direction our weather comes from."

A spotter can send out alerts from his automobile, boat or even on foot, though under severe weather conditions crew members are apt to stay glued to their rigs at home. Amateur radio has developed a reputation for re-establishing contact with the outside world after major disasters when all else fails.

By making use of repeater stations, which have the effect of re-amplifying signals and fanning them out, four-county coverage is assured.

Lewis says repeater stations are installed off State 21 between here and Omro, and at Appleton, Fond du Lac, Waupaca and New Holstein. A direct link with law enforcement authorities is one ARES hallmark.

Lewis points out National Weather Service limitations. The Neenah radar station picks up precipitation but

not much else. "It reads hail as precipitation," he says. Severe or potentially damaging winds and lightning outbreaks vary so drastically from place to place that firsthand observations by spotters are a must, he notes.

The Weather Service advises radio amateurs, or "hams," to report hail ½-inch in diameter or greater, damaging winds and flooding. An established procedure is worked out by the group which meets every Sunday, Lewis says. Contact from points as far west as Baraboo and New Lisbon are customary. Much of the severe weather of the Fox Valley approaches from the southwest.

FM radio, he also adds, is inherently noise and static free. But reception still depends upon properly installed and tuned equipment. RACES, for radio amateur's civil emergency service, is summoned by a county's emergency government director; ARES is contacted by a sheriff, fire department or Red Cross.

The last time the emergency crew activated the net was in mid-April during a worsening downpour, Lewis says. In addition, alert hams have relayed messages about traffic accidents and suspicious incidents nine

times so far this year. As a public service, the local ARES outfit assists officials for crowd control during parades and outdoor field events.

Lewis, who began his pursuit in 1972, says another class will be conducted soon for men and women interested on breaking into amateur radio. Persons enrolled range from age 16 into their 80s, he says.

His 120-watt rig in the basement may look innocuous enough, and is, he says. "But it gets around the world." He says he acquired an interest in electronics when a son returned from military service.

Amateur radio enthusiasts, despite the name, are no strangers to electronic theory or rules of courtesy on the air. Licenses are granted in five classes and one main requirement still remains a degree of mastery of Morse code — a way of communicating over long and short distances by "keying" a series of dots and dashes into a transmitter.

Lewis says one of the big reasons code proficiency is still required at the novice level and beyond is because code, or CW for continuous wave, often gets through when voice contacts fail.